

## Carbonic Anhydrase 9 Protein, Cynomolgus, Recombinant (His)

### General Information

|                       |   |
|-----------------------|---|
| Synonyms:             | CAIX;CA9;P54/58N;RCC;G250;EC 4.2.1.1;Carbonic Anhydrase IX;PMW1;CA-IX;MN                                      |
| Protein Construction: | Gln38-Asp402  |
| Species:              | Cynomolgus  |
| Expression Host:      | HEK293 Cells  |
| Accession:            | A0A2K5VQG9  |
| Molecular Weight:     | 41.03 kDa (predicted). Due to glycosylation, the protein migrates to 50-60 kDa based on Tris-Bis PAGE result. |

### QC Testing

|                      |  |
|----------------------|--|
| Biological Activity: | Immobilized Cynomolgus CA9, His Tag at 0.5µg/ml (100µl/Well) on the plate. Dose response curve for Anti-CA9 Antibody, hFc Tag with the EC50 of 5.1ng/ml determined by ELISA. |
| Purity:              | > 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC  |
| Endotoxin:           | < 1.0 EU/µg of the protein as determined by the LAL method.  |
| Formulation:         | Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization. |

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

CA9 is a member of the carbonic anhydrases' family, that is often expressed in cancer cells under hypoxic condition. CA9 expression potentially contributes to the regulation of cancer cell differentiation and mediates tumour-associated genes and signalling pathways, including apoptosis, hypoxia, G2M checkpoint, PI3K/AKR/mTOR signalling and TGF-beta signalling pathways.

Reference

Potter C, Harris A L. Hypoxia Inducible Carbonic Anhydrase IX, Marker of Tumour: Hypoxia, Survival Pathway and Therapy Target[J]. Cell Cycle, 2004, 3(2):159-162.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481